

The Condensation of Diaryl Amines With Iso-
valeraldehyde

S/079/60/030/05/53/074
B005/B125

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-na-Donu State University) ✓

SUBMITTED: May 4, 1959

Card 3/3

MINKIN, V.I.

Modification of the Doebner-Miller reaction. Zhur.ob.khim. 30
no.8:2760-2762 Ag '60. (MIRA 13:8)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Quinaldine)

ARDASHEV, B.I.; MINKIN, V.I.

Quinoline and its derivatives. Part 27: Joint condensation of
glyceraldehyde and 3-phenylglyceraldehyde with aromatic amines.
Zhur. ob. khim. 30 no.12:4005-4007 D '60. (MIRA 13:12)

1. Novocherkasskiy politekhnicheskiy institut.
(Glyceraldehyde) (Amines)

15,8063

30908

S/190/61/003/012/002/012
B101/B110

AUTHORS: Osipov, O. A., Minkin, V. I., Kashireninov, O. Ye.
TITLE: Physicochemical properties of resins obtained by polycondensation of benzyl chloride or 1-chloromethyl naphthalene with chlorides of elements of the fourth group
PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 12, 1961, 1774 - 1781

TEXT: The purpose of this study was (1) to obtain data on the activity of halides of elements of the fourth group (SiCl_4 , TiCl_4 , GeCl_4 , ZrCl_4 , and ThCl_4); (2) to compare the polyphenylene methyl resins obtained by polycondensation of benzyl chloride with the polynaphthylene methyl resins obtained by polycondensation of 1-chloromethyl naphthalene. Polycondensation of benzyl chloride was achieved at a molar ratio catalyst: benzyl chloride = 1 : 50. The yield was 80 - 90%. Dark-red, brittle substances were obtained, easily soluble in benzene, toluene, tetralin, carbon tetrachloride, and hexane, poorly soluble in ethanol, acetone, and other polar

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Physicochemical properties...

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B101/B110

solvents. The solutions fluoresced slightly. For the catalysts used it is indicated: with TiCl_4 the reaction started at 20°C , softening point of the resin 88°C , molecular weight (MW) 2500; SnCl_4 : reaction started at 20°C , softening point 79°C , MW 2200; ZrCl_4 : reaction started at 40°C , softening point 75°C , MW 1800. With SiCl_4 and ThCl_4 no reaction occurred even after long heating at 100°C . Polycondensation of 1-chloromethyl naphthalene was carried out at equal ratio catalyst : monomer. Results are given in Table 2. The catalytic activity increased in the order $\text{SiCl}_4 - \text{ThCl}_4 - \text{ZrCl}_4 - \text{GeCl}_4 - \text{SnCl}_4 - \text{TiCl}_4$. The decrease of catalytic activity in the order $\text{Ti} - \text{Zr} - \text{Th}$ is ascribed to increasing ionic binding between metal and chlorine. Poorly soluble polymers were obtained at elevated temperatures. This is ascribed to branching of macromolecules. The dielectric constant of the polymer was measured in benzene solution by a method described earlier (Osipov et al., Zh. obshch. khimii, 25, 662 1955) (Table 3). $\epsilon_{200\text{C}} > (n_D)^2$ is ascribed to infrared absorption. In solid phase, $\epsilon_{200\text{C}}$ was between 2.31 (polyphenylene methyl) and 2.55

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Physicochemical properties...

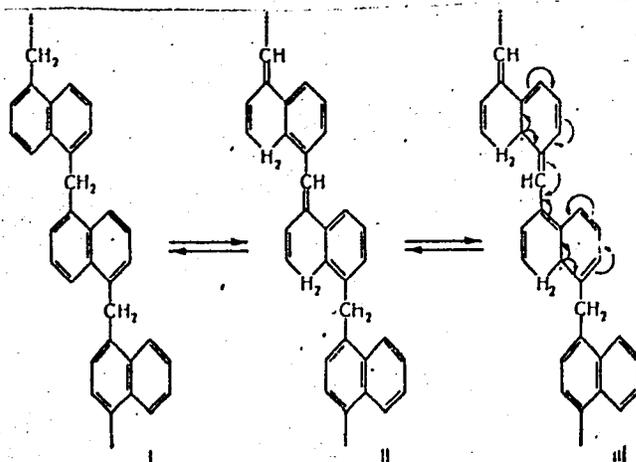
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S/190/61/003/012/002/012
B101/B110

(polynaphthylene methyl). The polymers are recommended for impregnation of paper condensers. The magnetic susceptibility was determined according to L. G. Gouy. $\chi \cdot 10^{-6} \text{ cm}^3/\text{g}$ for polynaphthylene methyl obtained with SiCl_4 was: +1.441; with TiCl_4 : -0.045; with GeCl_4 : +0.892; with ZrCl_4 : +0.226; with SnCl_4 : +0.758; with ThCl_4 : +0.331; with TiCl_4 in hexane: +0.555; with TiCl_4 in CCl_4 : +0.130. Since polynaphthylene methyl contains no polar groups, its paramagnetism is ascribed to formation of free radicals in the macromolecules:

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Physicochemical properties...

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B101/B110



Both the polyphenylene methyl and the polynaphthylene methyl polymers form films from benzene solution which firmly adhere to the metal and protect it from corrosion. A small iron plate covered with polynaphthylene methyl
Card 4/05

Physicochemical properties...

30908
S/190/61/003/012/002/012
B101/B110

film was exposed to 0.1 N HCl for 30 days with no corrosion occurring. Mentioned are: V. V. Korshak, N. N. Lebedev, M. A. Tsipershteyn (Zh. obshch. khimii, 19, 681, 1949); Yu. A. Lysenko, O. A. Osipov (Zh. obshch. khimii, 28, 1724, 1958); O. A. Osipov, V. M. Artemova (Dokl. AN SSSR, 133, 166, 1960); A. A. Berlin et al. (Vysokomolek. soyed. 1, 1644, 1959; *ibid.* 1, 1817, 1959). There are 5 tables and 32 references: 13 Soviet and 19 non-Soviet. The four most recent references to English-language publications read as follows: O. C. Dermer, E. Hooper, J. Amer. Chem. Soc., 63, 3525, 1941; W. A. Lager, Trans. Amer. Electrochem. Soc., 74, 177, 1938; J. Farquharson, Trans. Faraday Soc., 32, 219, 1936; M. E. Bedwell, J. Chem. Soc., 1947, 1950. X

ASSOCIATION: Rostovskiy gosudarstvennyy universitet (Rostov State University)

SUBMITTED: January 2, 1961

Card 5/05

OSIPOV, G.A.; SIMONOV, A.M.; MINKIN, V.I.; GARNOVSKIY, A.D.

Dipole moments of imidazole and its derivatives. Dokl. AN SSSR 137
no.6:1374-1376 Ap '61. (MIRA 14:4)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno
akademikom M.M. Shenyakinym.
(Imidazole--Dipole moments)

MINKIN, V.I.; SIMONOV, A.M.; MEDYANTSEVA, Ye.A.

Mechanism of the electronic effect of the trimethyl ammonium group from data obtained in studying the kinetics of the reaction of benzene and stilbene amino derivatives with picryl chloride. Zhur.ob.khim. 32 no.5:1591-1597 My '62. (MIRA 15:5)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Ammonium compounds, Substituted) (Benzene) (Picryl chloride)

MINKIN, V.I.; OSPOV, O.A.; GARNOVSKIY, A.D.; SIDONOV, A.M.

Dipole moments of imidazole and its derivatives. Zhur. fiz.
khim. 36 no.3:469-473 Mr '62. (MIRA 17:8)

1. Rostovskiy gosudarstvennyy universitet.

OSIPOV, O.A.; MINKIN, V.I.; KOGAN, V.A.

Effect of the chemical structure of organic complex-forming
anions on the polarity of complex compounds. Zhur. fiz. khim.
36 no.4:889-894 Ap '62. (MIRA 15:6)

1. Rostovskiy universitet.

(Complex compounds)

8/079/63/033/002/008/009
D204/D307

AUTHORS: Minkin, V.I. and Tumakova, Zh. A.

TITLE: Structure and reactivity of the condensation products of aromatic amines with aliphatic aldehydes. I. Isomerism and structure of ethyldenaniline dimers

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 2, 1963, 642 - 646

TEXT: Condensations of aniline with acetaldehyde, at -5 to 40°C, in neutral solvents (MeOH, EtOH, PrOH, petroleum ether, CHCl_3) gave rise to 4-isomeric bis-ethyldenanilines (2-methyl-4-phenylamino-1,2,3,4-tetrahydroquinolines). The cyclic tetrahydroquinoline structures were confirmed by uv absorption spectra in the region 200 - 350 m μ - the isomers gave intense bands at 250 m μ and less intense maxima at 300 m μ . In the ir (1500 - 1700 cm^{-1}) region, the absorption bands corresponding to C = N bonds were not observed, further confirming the cyclic structure. The existence of 4 isomers is

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Structure and reactivity ...

S/079/63/033/002/009/009
D204/D307

explained by the conformations of the piperidine ring. There are 2 figures.

SUBMITTED: November 15, 1961

Card 2/2

MINKIN, V.I.; GORELOV, M.I.

Structure and reactivity of the condensation products of aromatic amines with aliphatic aldehydes. Part 2: Dipole moments and conformations of bis-ethylenanilines. Zhur. ob.khim. 33 no.2:647-652 F '63. (MIRA 16:2)

1. Rostovskiy gosudarstvennyy universitet.
(Aniline—Dipole moments) (Stereochemistry)

MINKIN, V.I.; MEDYANTSEVA, Ye.A.; SIMONOV, A.M.

Acoplanar arrangement of molecules in benzaniline and its derivatives. Dokl. AN SSSR 149 no.6:1347-1350 Ap '63.

(MIRA 16:7)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno akademikom B.A.Arbuzovym.
(Benzaldehyde) (Aniline) (Molecular orbitals)

FENIN, Nikolay Konstantinovich; YASINETSKIY, Vyacheslav Grigor'yevich; Primal uchastiye MER, I.I.; BERKOV, A.M., kand. tekhn.nauk, retsenzent; DROBYSHEV, G.I., kand. tekhr. nauk, retsenzent; MINKIN, V.I., kand. tekhn. nauk, retsenzent; SHIMANOVICH, V.S., inzh., retsenzent; YELIZAVETSKAYA, G.V., red.; MAKHOVA, N.N., tekhn. red.

[Organization and technology of irrigation and drainage construction work] Organizatsiia i tekhnologiia gidromeliorativnykh rabot. Moskva, Sel'khozizdat, 1963. 478 p.

(MIRA 17:1)

1. Kafedra stroitel'nogo proizvodstva i mekhanizatsii Novocherkasskogo inzhenerno-meliorativnogo instituta (for Berkov, Drobyshev, Minkin). 2. Gosudarstvennyy Komitet Soveta Ministrov RSFSR po vodnomu khozyaystvu (for Shimanovich).

KOGAN, V.A.; OSIPOV, O.A.; MINKIN, V.I.; GORELOV, M.I.

Dipole moments and structure of inner-complex compounds of copper with aromatic Schiff bases. Dokl. AN SSSR 153 no.3: 594-596 N '63. (MIRA 17:1)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno akademikom V.I. Spitsynym.

GARNOVSKIY, A.D.; SIMONOV, A.M.; MINKIN, V.I.; DIONIS'YEV, V.D.

Transformations of systems containing an imidazole ring. Part 4:
Electron absorption spectra of N-alkyl-N'-3,4-dinitrophenyl imidazolium salts. Zhur.Ob.khim. 34 no.1:272-276 Ja '64. (MIRA 17:3)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

OSIPOV, O.A.; MINKIN, V.I.; KOGAN, V.A.

Dipole moments and the structure of o-hydroxyaldehyde anils. Zhur.fiz.
khim. 37 no.7:1492-1499 J1 '63. (MIRA 17:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

ZHDANOV, Yu.A.; MINKIN, V.I., kand. tekhn. nauk, otv. red.; BABIKOV,
V.V., red.

[Inversion method in organic chemistry] Obrashchenie metoda
v organicheskoi khimii. Rostov-na-Donu, Rostovskii univ.,
1963. 62 p. (MIRA 17:7)

OSIPOV, O.A.; MINKIN, V.I.; TUMAKOVA, Zh.A.

Dipole moments and structure of bis-salicylalaryliminates of nickel
(II). Zhur. strukt. khim. 5 no.6:918-919 N-D '64. (MIRA 18:4)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

MINKIN, V.I.; MEDYANTSEVA, Ye.A.; OSTROUMOV, Yu.A.

Application of the method of molecular orbitals to the study of the reactivity of Schiff bases. Methylation reactions. Zhur. ob. khim. 34 no. 5:1512-1517 My '64.
(MIRA 17:7)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

MINKIN, V.I.; NIVOROZHKIN, L.Ye.

Structure of bisalkylideneanilines. Zhur.ob.khim. 34 no.1:357-358
Ja '64. (MIRA 17:3)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

MINKIN, V.I.; NIVOROZHKIN L.Ye.

Structure and reactivity of the condensation products of aromatic amines with aliphatic aldehydes. Part 3: Bis (ethylidene- β -naphthylamine) and its molecular complexes. Zhur. ob. khim. 34 no.9: 2891-2896 S '64. (MIRA 17:11)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

L 17823-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-Li/Pr-Li/Ps-Li/Pt-IO RPL/
RAEM(a) RM/WW
ACCESSION NR: AP4047650 S/0079/64/034/010/3407/3411

AUTHOR: Garnovskiy, A. D.; Osipov, O. A.; Dalgatov, D. D.; Simonov, A. M.;
Minkin, V. ⁶

TITLE: Complex compounds of metals with certain nitrogen-containing ligands.
I. Complexes of the 2-o-hydroxyanilbenzimidazole series

SOURCE: Zhurnal obshchey khimii, v. 34, no. 10, 1964, 3407-3411

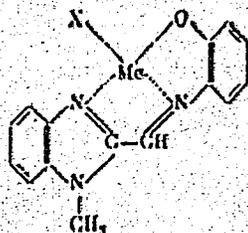
TOPIC TAGS: organometallic compound, chelate compound, benzimidazole derivative, organic complex

ABSTRACT: Two new o-hydroxyanils of 1-methyl-2-formylbenzimidazole were synthesized: 1-methylbenzimidazole-2-aldehyde-2'-hydroxyphenylimine and 1-methylbenzimidazole-2-aldehyde-(2'-acetylamino-5'-methoxy)phenylimine. The complex-forming ability of the first compound was investigated; the complexes of the second compound are to be subsequently described. Heating an alcoholic solution of the compound with the acetates or nitrates of Cu, Ni, Pb, Mn, Th or UO₂ gave brightly colored thermally stable rather insoluble crystals. Based

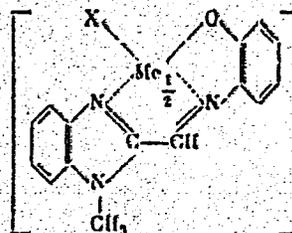
Card 1/3 ¹⁵

L 17823-65
 ACCESSION NR: AP4047650

on elementary analysis and IR spectra, the 1:1 complexes formed with Pb and UO_2 and the 2:1 complexes formed with Ni and Th were assigned the following chelate structures:



(III) Me = Pb, X = $OCOCH_3$, NO_2 ;
 (IV) Me = UO_2 , X = $OCOCH_3$.



(VI) Me = Ni, X = π -allyl;
 (VI) Me = Th, X = NO_2 .

1-methylbenzimidazole-2 derivatives containing no hydroxyl group or hydroxyl group in the p-position would not complex. The heteroatom of the imidazole ring

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L 17823-65
ACCESSION NR: AP4047650

2
was also shown necessary for chelate formation, since benzal-o-aminophenol would not form a complex under similar conditions. "Spectra were obtained by V. N. Sheynker on the UR-10 (Zeiss) apparatus in a paste with vaseline oil."
Orig. art has: 10 formulae

ASSOCIATION: Rostovskiy-na-Dony gosudarstvenny*y universitet (Rostov-on-Don State University)

SUBMITTED: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 010

Card 3/3

MINKIN, V.I.; ONIPIKO, G.I.; HOGAN, V.A.; SHAGIDULLIN, R.R.; TERENT'YEV, R.I.;
KATVSKIY, G.S.

Electronic and vibration spectra of anils of o-hydroxyaldehydes.
Zhur. fiz. khim. 38 no.7:1718-1727 J1 '64.

(MIRA 18:3)

1. Rostovskiy gosudatstvennyy universitet.

MINKIN, V.I.; ZHDANOV, Yu.A.; MEDYANTSEVA, Ye.A.

Electronic effects of substituents in aromatic systems as
transmitted through the azomethine group. Dokl. AN SSSR 159
no.6:1330-1333 D '64 (MIRA 18:1)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstav-
leno akademikom M.I. Kabachnikom.

MINKIN, V.I.; NIVORCZHKIN, L.Ye.

Structure and reactivity of condensation products of aromatic amines with aliphatic aldehydes. Part 6: Structure and transformations of isocamylidenearylamine dimers. Zhur. org. khim. 1 no.9:1632-1637 S '65. (MIRA 18:12)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Submitted May 11, 1964.

KOGAN, V.A.; OSIPOV, O.A.; MINKIN, V.I.; SOKOLOV, V.P.

Structure of titanium and tin complex compounds with some
aromatic Schiff bases. Zhur. neorg. khim. 10 no.1:85-88
Ju '65. (MIRA 18:11)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Submitted
July 24, 1963. *

GARNOVSKIY, A.D.; OSIPOV, O.A.; ORLOVA, L.V.; MIKHIN, V.I.

Copper complexes of benzal-o-aminophenols. Zhur.neorg.khim.
10 no.12:2821-2824 D '65. (MIRA 1961)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

MINKIN, V.I.; GORELOV, M.I.; OSIPOV, O.A.; OSTROUMOV, Yu.A.

Electron structure and absorption spectra of salicylanilide
and its derivatives. Opt. i spektr. 18 no.4:571-578 Ap '65.
(MIRA 18:8)

MINKIN, V.I.; NIVOROZHKIN, L.Ye.; BREN', V.A.

Structure and reactivity of the condensation products of aromatic amines with aliphatic aldehydes. Part 5: Synthesis and structure of bis-butylidenearylamines. Zhur. ob. khim. 35 no.7:1270-1275 J1 '65. (MIRA 18:8)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

ZHDANOV, Yu.A.; MINKIN, V.I.; MEDYANTSEVA, Ye.A.

Study of the electron conduction properties of arylazomethine
bridge groups. Zhur. ob. khim. 35 no.7:1280-1287 J1 '65.
(MIRA 18:8)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

MINKIN, V.I.; ZHDANOV, Yu.A.; GARNOVSKIY, A.D.; SADEKOV, I.D.

Special features of the intramolecular hydrogen bonding in molecules of the anils of o-hydroxyaldehydes and o-hydroxyanils. Dokl. AN SSSR 162 no.1:108-111 My '65. (MIRA 18:5)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Submitted August 27, 1964.

MINKIN, V.I., kand. tekhn. nauk; KORSHIKOV, A.A., inzh.

Studying and selecting optimal parameters for the working part of a ditcher turning the soil to one side. Trakt. i sel'khoz-mash. no.11:34-35 N '65. (MIRA 18:12)

1. Novocherkasskiy inzhenerno-meliorativnyy institut (for Minkin).
2. Yuzhnyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii (for Korshikov).

ZHDANOV, Yu.A.; MINKIN, V.I.; MIVODERKIN, L.Ye.; PARINSKIY, A.I.

Unusual oxidative breakdown of C-C bonds in allylideneacrylamides.
Dokl. AN SSSR 166 no.1:110-113 Ja '66.

(MIRA 19:1)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Submitted
February 2, 1965.

ARDASHEV, B.I.; MINKIN, V.I.

6. Methoxyquinoline. Metod. polush. khim. reak. 1 prepar.
no.11:80-81 '64. (MIRA 18:12)

1. Novocherkasskiy politekhnicheskiy institut. Submitted
April 1964.

OSIPOV, Osip Aleksandrovich; MINKIN, Vladimir Isaakovich; ISUPOVA,
G.G., red.

[Handbook on dipole moments] Spravochnik po dipol'nym mo-
mentam. Izd. 2., perer. i dop. Moskva, Vysshaia shkola,
1965. 262 p. (MIRA 18:7)

MINKIN, V.L.

Scientific and technical conference on the use of advanced technology. Kons. i ov.prom. 17 no.4:39-40 Ap '62. (MIRA 15:3)
(Ukraine--Canning industry)

ZAKHS, E.R.; MINKIN, V.I.; EFROS, L.S.

Imidazole derivatives. Part 37: Synthesis of 5,6-quinones of
benzimidazole. Zhur. org. khim. 1 no.8:1466-1475 Ag '65.
(MIRA 18:11)

1. Leningradskiy tekhnologicheskii institut imeni Lenooveta.

Minkin, V. M.

ik
✓ The High-Pressure Operation of Blast-Furnaces at the Kuznets Combine. B. N. Zherobin, G. E. Kazimirovskii, N. V. Krepyshch, and V. M. Minkin. (Stal', 1953, (12), 1063-1073). [In Russian]. High top-pressure blast furnace operation was first introduced at the Kuznets combine in 1950 on a furnace which had worked for over six years without relining. The operation of this and of newly lined furnaces is described in this article, operating data and constructional details being given. The following were found to be the main

4 5-100

...the production of more powerful blowers should
be undertaken, the quality of refractories improved and that
the design of individual parts of the furnace be critically exam-
ined with a view to improvements.—s. k.

1111 1 11
Influence of certain factors on the extent of oxidizing
zone in blast furnaces. B. N. Zherebin, V. M. Minkin,
I. D. Nikulinski, V. M. Obsharov, I. A. Sushkov, and M.
Ya. Ostroukhov (Met. Combine, Kuznetsk). *Stal'* 16, No.
5. 391-6 (1956) —A series of studies conducted

...when it is large. increased top pres-
...reduces the length of the oxidation zone. (P.D. Cal)

SHTYREV, D.A.; SUCHKOV, I.A.; MINKIN, V.M.

Kuznetsk blast furnace operators. Metallurg. 2 no.4:9-12
Ap '57. (MLRA 10:5)

1. Zamestitel' nachal'nika domennogo tsekha Kuznetskogo metallurgicheskogo kombinata (for Shtyrev). 2. Starshiy master tekhnologicheskoy gruppy Kuznetskogo metallurgicheskogo kombinata (for Suchkov). 3. Nachal'nik domennoy laboratorii Tsentral'noy zavodskoy laboratorii Kuznetskogo metallurgicheskogo kombinata (for Minkin).
(Stalinsk--Blast furnaces)

VOZNESENSKIY, A.A., kand. tekhn. nauk; MINKIN, V.M., inzh.

Effect of zinc on the refractory lining of blast furnaces. Trudy Sib.
met. inst. no.4:3-22 '57. (MIRA 11:6)
(Blast furnaces) (Refractory materials) (Zinc)

VOZNESENSKIY, A.A., kand.tekhn.nauk, dotsent; MINKIN, V.M., inzh.

Certain characteristics of blast furnace performance in
smelting zinc-containing iron ores. Izv.vys.ucheb.zav.;
chern.met. no.6:15-27 Je '58. (MIRA 12:8)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgi-
cheskiy kombinat. Rekomendovano kafedroy metallurgii chuguna
Sibirskogo metallurgicheskogo instituta.
(Blast furnaces)

MINKIN, V. M.

SOV/133-58-7-1/27

AUTHORS: Zherebin, B.N., Engineer, Dembovetskiy, V.P., Candidate of Technical Sciences, Dotsent and Minkin, V.M., nikulinskiy, I.D., Engineers

TITLE: Smelting of Pig Iron with a Low Content of Manganese and Phosphorus (Vyplavka chuguna s nizkim sodержaniyem margantsa i fosfora)

PERIODICAL: Stal', 1958, nr 7, pp 578 - 585 (USSR)

ABSTRACT: Experimental smelting of low-manganese, low-phosphorus pig iron carried out on the Kuznetsk Metallurgical Combine during 1953-1955 is described. The manganese content was decreased in stages from 1.7 - 1.8% to 1.1 - 0.9% (1953-1954), then to 0.75 - 0.85% (1954) and to 0.45 - 0.55% (1955). Phosphorus content was decreased from 0.25 - 0.27% to 0.14 - 0.16%. The production of the latter type of iron is being continued. On the basis of analysis of operating and performance data of three blast furnaces (Table 1 and 2 and Figures 1 - 9) the following conclusions are drawn: the best operational results were obtained when basic slag and Mazul'skiy manganese ores were completely excluded from the burden. The possibility of production from low-manganese iron of rail quality carbon and alloy steels without an increase in the ferromanganese

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SOV/133 -58-7-1/27

Smelting of Pig Iron with a Low Content of Manganese and Phosphorus

additions and without any decrease in quality was confirmed in practice. The existing views on the role of manganese in the blast furnace process (in respect of slag formation, physico-chemical properties of slag and pig iron, desulphurisation processes) should be reconsidered in the light of the results obtained during the present investigation. The use in the blast furnace burden of such poor, difficult-to-reduce substitute as an open-hearth slag can be advantageous only during the smelting of very rich ores with a high-sulphur coke (under modern conditions, it leads only to an increase in slag volume (Figure 8), an increase in the coke rate and a decrease in the output). Complete elimination of manganese containing additions leads to a 5.4% increase in the output of blast furnaces, a 5.6% decrease in the coke rate and a decrease in costs of 10.16 roubles per ton/iron. The main factors decreasing costs of production are: the elimination of manganese ore from the burden and the decrease in the coke

Card 2/3

SOV/133-58-7-1/27

Smelting of Pig Iron with a Low Content of Manganese and Phosphorus

rate. A comparatively small increase in the basicity of slag (from 0.98-0.99 to 1.05-1.06) secured the production of pig without increased sulphur content. The technology of production of low-manganese pig which is in operation on the Kuznetsk Combine should be spread to works in the southern and central parts of the USSR.

There are 2 tables and 9 figures, and 4 Soviet references.

ASSOCIATIONS: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine) and Sibirskiy metallurgicheskiy institut (Sibirskiy Metallurgical Institute)

1. Iron--Production 2. Manganese--Elimination 3. Phosphorus
--Elimination 4. Blast furnaces--Operation

Card 3/3

ZHEREBIN, Boris Nikolayevich; MINKIN, Valentin Mikhaylovich; MATUSEVICH, Leonid Yakovlevich; GUR'YANOV, Vasilii Grigor'yevich; MARKHASIN, Yuriy Abramovich; SHTYREV, Dmitriy Alekseyevich; BALLA, G.F., red.; SOKOLOVSKIY, V.A., red.; DOKUKINA, Ye.V., red. izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Expansion of blast furnace production at the Kuznets Metallurgical Combine] Razvitie domennogo proizvodstva na Kuznetskom metallurgicheskom kombinat. Pod obshchei red. B.N.Zherebina. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 361 p. (MIRA 14:6)
(Stalinsk--Blast furnaces)

ZHEREBIN, B.N.; DEMBOVETSKIY, V.P.; MINKIN, V.M.; NIKULINSKIY, I.D.;
Prinimali uchastiye: ~~OBSHAROV, V.M., inzh.~~; RAYEV, Yu.O., inzh.;
ZHIGULEV, P.T., inzh.; SUCHKOV, I.A., inzh.; BEREZKIN, B.S.,
inzh.; NEKRASOV, V.M., inzh.; ZHUKOVICH, A.I., inzh.

Use of coke-oven gas in blast furnaces. Stal' 21 no.8:673-679
Ag '61. (MIRA 14:9)

1. Kuznetskiy metallurgicheskiy kombinat i Sibirskiy metallurgicheskiy institut.
(Blast furnaces--Equipment and supplies)

GESS, B.A.; CHERNYSHEV, A.M.; KANAVETS, P.I.; MELENT'YEV, P.N.;
KHROMYAK, R.P.; VORONOV, Yu.G.; TSYLEV, L.M.; CHERNYKH, V.I.;
BORISOV, Yu.I.; SPORIUS, A.E.; Prinimali uchastiye: TOLEROV,
D.D.; MINKIN, V.M.; MARKIN, A.A.; GORLOV, M.Ya.; KHAYLOV, B.S.

Experimental blast furnace smelting with replacement in
the charge of 20-per cent of the fluxed sinter by granules
prepared by chemical catalysis. Trudy IGI 22:110-113 '63.
(MIRA 16:11)

VIKTOROV, I.I.; LEBEDEV, V.A., inzh.; KOVAL'SKIY, M.B.; ALEKSEYEV, I.P.;
MINKIN, V.B.; SHISHELIN, K.A.

Stabilization of loose soils of embankment foundations by
constructing sand drains. Transp.strol. 15 no.10:37-39
0 '65. (MIRA 18:12)

1. Rukovoditel' laboratorii Vsesoyuznogo nauchno-issledovatel'skogo instituta transportnogo stroitel'stva Ministerstva transportnogo stroitel'stva (for Viktorov). 2. Glavnyy inzh. tresta Kandalakshtransstroy (for Koval'skiy). 3. Glavnyy inzh. proyekta Leningradskogo gosudarstvennogo proyektno-izyskatel'skogo instituta Gosudarstvennogo proizvodstvennogo komiteta po transportnomu stroitel'stvu SSSR (for Minkin).

VLADIMIRSKIY, V.I.; MINKIN, Ye.I.

Problems of the control of the depletion and pollution of under-
ground waters. Nauch.trudy AKKH no.27:86-97 '64.

(MIRA 18:5)

MINKIN, Y. L.

~~MINKIN, Y. L.~~

Problems of predicting the salt balance in newly irrigated soils
[with summary in English]. Pochvovedenie no.9:70-78 S '57.
(MIRA 10:12)

1. Laboratoriya gidrologicheskikh problem AN SSSR.
(Water, Underground--Analysis) (Minerals in soil)

MINKIN, Ye. L. Cand Geol-Min Sci -- (diss) "The ground-water ^{reservoir} ~~reservoir~~ the
territory of the Lower-Don irrigation system. Mos, 1958. 21 pp (Min of Higher
Education USSR. Mos Geol Prospecting Inst im S. Ordzhonikidze), 120 copies
(KL, 14-58, 111)

- 28 -

MINKIN, Ye.L.

Relationship between the piezometric levels of Carboniferous
aquifers in the Moscow artesian basin. Razved. i okh. nedr 27
no.4:35-40 Ap '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i
inzhenernoy geologii.
(Water, Underground)

MINKIN, Ye. L.

Method for an approximate determination of the ground water recharge or evaporation and transpiration losses under irrigation conditions. Vop. gidrogeol. i inzh. geol. no.20:90-93 '62. (MIRA 16:4)

(Water, Underground) (Irrigation)

MINKIN, Ye.L.

Depletion of underground waters. Razved. i okh. nedr 29
no.5:51-55 My '63. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii
i inzhenernoy geologii.
(Water supply)

MINKIN, Ye.V., aspirant; SHESTAKOVA, I.S., doktor tekhn. nauk, prof.

Effect of a preliminary treatment of collagen on its
dissolving. Nauch. trudy MTILP 25:52-57 '62. (MIRA 16:8)

1. Kafedra tekhnologii kozhi i mekha Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.

MINKIN, Ye.V., aspirant; PISKAREVA, L.V., studentka; PROKOP'YEVA, F.A.;
UPPICOVA, R.Kh.

Effect of the preliminary treatment of collagen on its dissolving
at different pH values. Report No.2. Nauch. trudy MTILP no.27:
39-41 '63. (MIRA 17:11)

1. Kafedra tekhnologii koshil i melna Moskovskogo tekhnologicheskogo
instituta legkoy promyshlennosti.

MINKIN, Ye.V., assistant; SHESTAKOVA, I.S., doktor tekhn. nauk, prof.;
BEGANOV, F.M., inzh.

Effect of the preliminary treatment of collagen on its dissolving.
Report No.3. Nauch. trudy MTIIF no.27:72-77 '63.

(MIRA 17:11)

1. Kafedra tekhnologii kozhi i mekha Moskovskogo tekhnologicheskigo
instituta legkoy promyshlennosti.

MINKIN, Ye.V., aspirant; SHESTAKOVA, I.S., doktor tekhn. nauk, prof.;
GLOVINA, G.S., inzh.

Effect of the preliminary treatment of collagen on its dissolving.
Report No.4. Nauch. trudy MTIL' no.27:43-53 '63.

(MIRA 17:11)

1. Kafedra tekhnologii kozhi i mekha Moskovskogo tekhnologicheskogo
instituta legkoy promyshlennosti.

MINKIN, Ye.V., aspirant; SHESHAKOVA, I.S., doktor tekhn. nauk, prof.;
RUSSKINA, N.K., inzh.

Effect of the preliminary treatment of collagen on its dissolving.
Report No.5. Nauch. trudy MTILP no.27:54-59 '63.

(MIRA 17:11)

1. Kafedra tekhnologii kozhi i mekha Kuznetskogo tekhnologicheskogo
instituta legkoy promyshlennosti.

MINKIN, Ye.V., aspirant; STESHOV, G.I., aspirant; SHENSTAKOVA, I.S., doktor
tekhn. nauk, prof.; GOLOVTEYEVA, A.I., kand. tekhn. nauk, dotsent

Effect of the preliminary treatment of collagen on its dissolving.
Report No.6. Nauch. trudy MTILP no.27:0-66 '63. (MIP: 17:11)

1. Kafedra tekhnologii kozhi i mekha Moskovskogo tekhnologicheskogo
instituta legkoy promyshlennosti.

MINKIN, Yu., podpolkovnik; BOLESHANOV, N., inzhener-podpolkovnik.

~~_____~~
Diesel electric power inst. Voen.-inzh. shur. 101 no.5:28-29 no.5:
28-29 My '57. (MIRA 10:6)

(Electric generators)

MINKIN, Z.

Factories - Accounting

Alternative for computing the movement of finished products in industrial enterprises.
Bukhg.uchet 11 No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress August 1952 UNCLASSIFIED.

MINKIN, Z.I.; MERZON, G.D.

~~Operation of cable lines~~
Operation of cable lines. Prom.energ. 12 no.1:5-7 Ja '57.

(MLRA 10:2)

(Electric cables) (Heating pipes)

MINKIN, Z. M.

PA-2T21

USSR/Instruments - Viscosimeters
Lubricating Oils

Mar 1947

"Theory of a Motor Viscosimeter," Z M Minkin, 3 pp

"Energeticheskiy Byulleten" No 3

Brief description, with schematic diagram, mathematical account of the theory of the instrument with a graph and statistical table. Used to measure motor lubrication oils.

2T21

МЕРКИН, З. М.

"Letter to the Editor," Energet, Byul, No. 8, 1948.

USSR/Engineering
Machine Building
Oil Filters

May 49

"Hydraulic Calculations for Certain Types of Fine-Grained Oil Filters in Machine Building," Z. M. Minkin, 7 pp

"Borzet Byul" No 5

Points out importance of subject to industry, and need for accurate hydraulic analysis to select proper filters in each case. Subject has received insufficient attention in past. Reviews work done by G. D. Bernshtein, Soviet researcher. Gives experimental data verifying formulas calculated for

56/49733

USSR/Engineering (Contd)

May 49

cylindrical filters with radial oil flow. Stresses need for more test data on penetrability of various filter materials.

56/49733

MINKIN, Z. M.

MINKIN, Z. M.

PA 161770

USSR/Fuel - Filters, Oil
Diesel Engines

Jan 50

"Oil Filters for Coarse Cleaning of Oil in Diesels,"
Z. M. Minkin, 6 pp

"Energet Byul" No 1

Briefly describes subject filters with sketches.
Explains elementary methods for designing them.

161770

MINKIN, Z. M.

166T17

USSR/Engineering - Diesel Engines
Oil Filters

Jul 50

"Use of Fine Lubricating Oil Filters in Diesels,"
Z. M. Minkin

"Energet Byul" No 7, pp 4-9

Gives results of experiment in use of Soviet-made fine lubricating oil filter Type ASFO in two pressure-fed diesels: Type 6Ch23/30 with rated power of 610 hp at 1,000 rpm, and Type 6Ch8.5/11 with rated power of 30 hp at 1,500 rpm. Concludes ASFO filter is superior to mineral wool filters. Includes diagrams of lubricating oil system of both types of diesel.

166T17

MINKIN, Z.M., inzh.

Calculation of the thermodynamic properties of gases on the
expansion and compression lines of the indicator diagram.
Energomashinostroenie 4 no.4:17-19 Ap '58. (MIRA 11:7)
(Thermodynamics) (Gases)

MINKIN, Z. M.

with I. I. Vibe, N. K. Arslanov, and K. I. Genkin and others "Heat production in the engine and its influence on the stroke"

**report presented at the conference on Combustion and Formation of the Mixture in Diesel Engines, convened by the Motor Laboratory, Acad. Sci. USSR, Moscow 10-12 June 1958.
(Vest. Ak Nauk SSSR, 1958, No. 9, 115-117)**

IVANCHENKO, N.N., kand.tekhn.nauk; ~~MINKIN, Z.M., kand.tekhn.nauk~~

V.V. Arinkin's book "Improving the performance of the D100
diesel piston group. Energomashinostroenie 6 no.5:48 My '60.
(Diesel engines) (MIRA 13:9)
(Arinkin, V.V.)

MINKIN, Z.M., kand.tekhn.nauk

Some remarks concerning K.N.Koptev's article "Accuracy of the
construction of the heat consumption curve of a diesel engine."
Energomashinostroenie 9 no.2:40-42 F '63. (MIRA 16:3)
(Diesel engines) (Koptev, K.N.)

MINKIN, Z.M., kand. tekhn. nauk

Exact and approximate method for calculating thermodynamic functions in various parts of the indicator diagram. *Energo-mashinostroenie* 10 no.4:40-41 Ap '64. (MIRA 17:6)

MINKIN, A.A.

U.S.S.R.

3035. EVALUATION OF THE PRINCIPAL TYPES OF PEAT FOR USE IN AGRICULTURAL CHEMISTRY. Nikonov, M.M., Grebenshikova, A.A., Minkin, T.S., and Golgatukaya, O.V. (Tr. Prikl. (Peat Ind., Moscow), Apr. 1954, vol. 31, 11-14; abstr. in Chem. Abstr., 1954, vol. 48, 13115). The authors have studied the H, CaO, P₂O₅, and Fe₂O₃ content and the pH of a large number of types of Russian peat, and have expressed their "agricultural chemical indexes" as fractions, by dividing the percentage of the various ingredients present by their average content in the particular type of peat. (L). C.A.

MINKINA, A.G.

NOVIKOV, A.V.; GANINA, A.Z.; ONEGINA, A.K.; STULOVA, M.V.; AZAROVA, L.A.;
DAN'KOVA, M.N.; OPOLCHENTSEVA, T.D.; SHIBAYEV, D.P.; ZHABYKO, Ye.G.;
~~MINKINA, A.G.~~; OVSIANKINA, Ye.I.; SAVENKOV, F.S., red.; SLENZIN,
A.A., red.; FOMICHEV, P.M., tekhn.red.

[Economy of Kaluga Province; collected statistics] *Merodnoe khoziat-*
stvo Kaluzhskoi oblasti; statisticheskii sbornik. Moskva, Gos.stat.
izd-vo, 1957. 142 p. (MIRA 11:6)

1. Kaluzhskaya oblast', Statisticheskoye upravlenie. 2. Statisti-
cheskoye upravleniye Kaluzhskoy oblasti (for all except Savenkov,
Slenzin, Fomichev) 2. Nachal'nik Statisticheskogo upravleniya
Kaluzhskoy oblasti (for Savenkov)
(Kaluga Province--Economic conditions--Statistics)

MAKASHEV, A.P.; Prinsipali uchastiye: ALDAKIMOVA, A.Ya.; MINKINA, A.I.,
mladshiy nauchnyy sotrudnik; SOKOLOVA, Ye.V.

[Use of carbon dioxide in fish preservation]. Primenenie ugle-
kisloty pri khraneni ryby. Moskva, Pishchepromizdat, 1959. 136 p.
(Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut morskogo
rybnovo khoziaistva i okeanografii. Trudy, vol. 37). Trudy VNIRO
37 '59. (MIRA 17:4)

1. Starshiy laborant tekhnologicheskoy laboratorii Dono-Kuban-
skogo otdeleniya Azovsko-Chernomorskogo nauchno-issledovatel'skogo
instituta morskogo rybnogo khozyaystva i okeanografii (for Aldaki-
mova, Sokolova). 2. Tekhnologicheskaya laboratoriya Dono-Kubansko-
go otdeleniya Azovsko-Chernomorskogo nauchno-issledovatel'skogo
instituta morskogo rybnogo khozyaystva i okeanografii (for Min-
kina).

CA MINKINA, A-I.

11A

Interaction of thiamine and ascorbic acid Z. S. Gid
 -benovich and A. I. Minkina (Kostov Univ.) *Russkoye*
 10, 36-40 (1951). When equal vols. of 0.001 N solns. of
 ascorbic acid and thiamine are mixed, 43% of the ascorbic
 acid is still left after 48 hrs., whereas in a control expt. with-
 out thiamine all the ascorbic acid disappeared. During
 the first 4 hrs., the oxidation of ascorbic acid actually pro-
 ceeds more rapidly in the presence of thiamine than in its
 absence. Oxythiamine exerts a stabilizing effect even dur-
 ing the first 4 hrs. Both thiamine and oxythiamine stabilize
 ascorbic acid even in the presence of Cu, which is a powerful
 oxidation catalyst. The dectns. of ascorbic acid, dehydro-
 ascorbic acid, and diketogulonic acid with 2,4-dinitrophenyl-
 hydrazine have shown that thiamine inhibits the transfor-
 mation of ascorbic acid into dehydroascorbic acid. When
 oxythiamine is used, ascorbic acid disappears, and dehydro-
 ascorbic acid accumulates. In the control, diketogulonic
 acid accumulates. H. Priestley

1951

~~MINKINA, A. I.~~

Mechanism of action of thiamine on oxidation of ascorbic acid. *Biochimia*,
Moskva 17 no.3:272-281 May-June 1952. (CML 25:1)

1. Biological Scientific-Research Institute, Rostov University.

GERSHENOVICH, Z.S.; MINKINA, A.I.

Interaction of thiamine and ascorbic acid. Vitaminy no.2:158-173 '56.
(MLRA 10:8)

1. Nauchno-issledovatel'skiy biologicheskiy institut pri universitete,
Rostov na Donu
(THIAMINE) (ASCORBIC ACID)

MAKASHEV, A.P., kand. tekhn. nauk; MINKINA, A.I., kand. biol. nauk;
ALDAKIMOVA, A.Ya.; SOKOLOVA, Ye.V.

Effect of the intensity of proteolysis and the presence of microbes
on the occurrence of "split bellies" in some fish species. Trudy VNIRO
35:145-151 '58. (MIRA 11:11)

1. Azovskoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo
instituta morskogo rybnogo khozyaystva i okeanografii.
(Fishery products--Preservation) (Food spoilage)

MINKINA, A.I.; DUBOV, O.Ye.

Chemical composition and physicochemical properties of gonadotropic hormones. *Biokhimiia* 25 no.2:264-272 Mr-Apr '60. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut akusherstva i pediatrii, Rostov-na-Donu.

(GONADOTROPIN)

MINKINA, A.I. (Rostov, USSR)

Biochemische Charakteriska der gonadotropen Hormone in der
Onotogense.

Report submitted for the 3rd World Congress, Intl Federation of
Gyneology and Obstetrics, Vienna, Austria, 3-9 Sep 1961

MINKINA, A. I. (USSR)

"Some Findings on the Biological Activity and Chemical Composition
of the Gonadotropic Hormones in Ontogenesis."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

ISHCHENKO, L.V.; MINKINA, A.I.

Automatic collector for collecting fluids. Lab. delo 8 no.2:59-60
F '62. (MIHA 15:2)

1. Rostovskiy-na-Donu nauchno-issledovatel'skiy institut akusherstva
i pediatrii Ministerstva zdravookhraneniya RSFSR (dir. - kand.med.nauk
F.S.Baranovskaya).
(MEDICAL LABORATORIES...EQUIPMENT AND SUPPLIES)

MINKINA, A. L.

Minkina, A. L. - "The effect of various iron concentrations on the growth and gas metabolism of fish," Trudy Mosk. zooparka, Vol. IV, 1949, p. 168-79

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

MINKINA, A.Ye., inzh. (st.Karaganda, Kazakhskoy dorogi)

Keeping tracks in excellent condition. Put' i put.khoz. 6
no.11:35 '62. (MIRA 16:1)
(Karaganda—Railroads—Maintenance and repair)

USSR/ Electronics - Testing instruments

Card 1/1 Pub. 89 - 25/40

Authors : Minkina, E.

Title : A television testing instrument

Periodical : Radio 10, 34-36, Oct 1954

Abstract : A universal-type instrument for checking the performance of television sets is described. The instrument was designed and constructed by the Laboratory of the Moscow Division of the Scientific Research Institute of the Ministry of Radio and Television Industry. The following units of the instrument are described in detail: the ultrashort-wave oscillator unit; the pulse-generator; the kilovoltmeter, and the feedback section. Data on the coil-windings of the power-transformer are given in a special table. General circuit diagram; illustrations; table.

Institution:

Submitted:

MINKINA, E.

107-57-5-45/63

AUTHOR: Minkina, E., Sidorov, I.

TITLE: A Converter for KBN-49 TV Set (Konverter k televizoru KBN-49)

PERIODICAL: Radio, 1957, Nr 5, pp 41-42 (USSR)

ABSTRACT: A description of a new converter developed "in one of the Moscow scientific research institutes" is presented. The converter is intended to bring channels 4 and 5 within the range of the KBN-49 tv set which is designed for three channels (1, 2, and 3) only. The converter, whose simplified circuit diagram is shown in the article, comprises a one-stage h-f amplifier, a mixer, a heterodyne, and a rectifier. Tubes used: 6Zh1P, 6N3P. A selenium rectifier supplies d.c. to the tubes. Converter amplification factor is about 8-10. Frequency drift on warm-up is 15-20 kc after 1 $\frac{1}{2}$ -2 hours. Details given. There is one figure.

AVAILABLE: Library of Congress

Card 1/1

USSR / Human and Animal Physiology. Blood Circulation.

T-4

Abstr Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3425

Author : Minkina, I. S.

Inst : KHARKOV MEDICAL SOCIETY

Title : Variations of the Sympathicotropic Substance of the Blood During Therapeutic Effects of the Peripheral Sympathetic Trunk in Thromboangitis Obliterans

Orig Pub : Tr. Kharkovsk. nauchn. med. o-vo, 1957, Vyp. 7, 269-273

Abstract : In the blood returning from a thromboangitis obliterans-affected extremity, the amount of the sympathicotropic substance is increased. It is recommended that the contents of the latter (with tests on the isolated frog heart; from effect upon the blood pressure of the narcotized cat) ? be determined in order to ascertain the effectiveness of therapeutic measures upon the sympathetic ganglia. In 25 of 33 patients, following a

Card 1/2

38

BRYANTSEV, Boris Aleksandrovich; DOBROZRKOVA, Taisiya Leonidovna;
MINKINA, L.N., red.; BARANOVA, L.G., tekhn.red.; FRIDMAN, Z.L.,
tekhn.red.

[Protection of plants against pests and diseases] Zashchita
rastenii ot vreditel'ei i boleznei. Moskva, Sel'khozizdat,
1963. 503 p. (MIRA 17:1)

(Plants, Protection of)

BERIM, N.G.; VOYEVODIN, A.V.; VYSOTSKAYA, P.F.; IVANOVA, N.A.;
OSOLOVSKIY, G.Ye.; MINKINA, L.N., red.; BARANOVA, L.G.,
tekhn. red.; FRIDMAN, Z.L., tekhn. red.

[Practical manual on the use of poisonous chemicals and
herbicides in plant growing] Prakticheskoe rukovodstvo po
primeneniiu iadokhimikatov i gerbitsidov v rastenievod-
stve. [By] N.G.Berim i dr. Moskva, Sel'khozizdat, 1963.
614 p. (MIRA 17:1)

(Field crops--Diseases and pests)

(Agricultural chemicals)

(Herbicides)

LEOKENE, Lidiya Vasil'yevna; GOKHNER, L.M., red.; MINKINA, L.N.,
red.

[Spring and winter vetch] Iarovaia i ozimaia vika. Le-
ningrad, Kolos, 1964. 85 p. (MIRA 17:12)